NEWSLINE

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NIF's family affair

JACQUELINE MCBRIDE/NEWSLINE

More than 1,000 people toured the National Ignition Facility last weekend during the project's family open house. From left: Lab employee Gene Vergel De Dios explains NIF target technology to his daughter, Ashley, and his wife, El.

Post-Cold War research foundation celebrates 10 years of fostering international science collaborations

September marks the tenth anniversary of the U.S. Civilian Research and Development Foundation (CRDF), a unique organization created in the wake of the Cold War to foster civilian research collaborations between scientists from the United States and the former Soviet Union (FSU).

Authorized by Congress in 1992, and established as a nonprofit, non-governmental organization by the National Science Foundation in 1995, CRDF was the brainchild of former California Congressman George Brown, an industrial physicist and chairman of the House Science Committee. At the core of CRDF are its grants designed to fund collaborative, non-military research projects between U.S. scientists and Eurasian researchers, particularly those with WMD expertise.

"The CRDF allows scientists from different countries and backgrounds to collaborate on problems of international importance and devise solutions," said Dona Crawford, associate director for Computation and a member of the CRDF Board. "I have a long-standing interest in nonproliferation and strongly believe that building international partnerships generates new knowledge and advances global security."

CRDF helps scientists in the FSU to continue their contributions to world scientific knowledge, and to create more prosperous economies in their region. The Foundation employs former Soviet weapons scientists on civilian research projects, giving them an alternative

See **CRDF,** *page 4*

Physicist Tony Tyson to illuminate the 'puzzle of dark energy'

Physicist J. Anthony "Tony" Tyson will deliver a Director's Distinguished Lecturer Series presentation entitled "Petabytes from the Sky: The Puzzle of Dark Energy" at 3:30 p.m. Tuesday, Oct. 11 in the Bldg. 123 auditorium.

Tyson, a distinguished professor of physics at the University of California, Davis, is an experimentalist interested in gravitational physics. His current research is in cosmology: dark matter distribution, gravitational lens effects, cosmic shear, and the nature of dark energy. These investigations use software for pattern recognition, detection of transients in images, large database handling and processing, and new instrumentation for optical astronomy.

Transformational events in science often are preceded by periods of great puzzlement. The inexplicable "dark side" of our Universe likely represents such an opportunity. In recent years, it has become apparent that our Universe is dominated by dark matter and dark energy, unseen forms of matter and energy not described by today's physics.

See **DDLS,** *page 3*

A 2005 HOME perspective from campaign chair Lann

The 2005 HOME campaign is just around the corner with the "Run for HOME" on Oct. 12.

The run will begin promptly at noon. Participants should gather at 11:30 in the Z-3 parking area west of Bldg. 132. All employees are invited to participate in the race — walk, run, or skate. Costumes are encouraged. Look for instructions, a detailed map, and more about what's in store during this year's "Run for Home" in next Friday's *Newsline*, *Newsonline*, or at http://home.llnl.gov/

See **HOME,** *page 4*

Cycle odyssey ends

From left: Retired Livermore teacher Janis Turner and Lab employees Celeste Matarazzo and Rose O'Brien dipped their bicycle wheels into the Atlantic Ocean at Virginia Beach, Va., on Wednesday. This act symbolizes the conclusion of their 60-day, 3,815-mile bicycle ride across the country. Along the way, they met many good and generous people, took only two days of rest, changed dozens of flat tires, and also raised several thousand dollars for Tri-Valley Hope Hospice. The trio will return to California early next week. To find out more about their journey or to pledge your support, visit http://www.cycleusa4 hope.org/.

LAB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 3

Saturday 1

The **San Joaquin Expanding Your Horizons conference** takes place today at the University of Pacific (UOP) in Stockton. About 300 girls in grades 6-12 from Stockton, Lodi, Manteca, Tracy and Ripon are expected to participate and learn more about challenging careers in mathematics and science. This year's keynote speaker is Tammy Jernigan, former astronaut and Lab principal deputy director of Physics and Advanced Technologies Directorate (PAT). The Lab, Sandia and the University of the Pacific School of Engineering and Computer Science co-sponsor the annual conference.

Tuesday 4

Catch the spirit of this year's **HOME Campaign** theme "There's no place like home" and watch the original "Wizard of Oz," Part I, today in the Bldg. 361 auditorium, 11:45 a.m.-1 p.m. Prior to the movie, there will be a "Wizard of Oz" trivia contest.

Wednesday 5

The **HOME Campaign** presents the "Wizard of Oz" Part 2 in the Bldg. 361 auditorium, 11:45 a.m.-1 p.m. Don't forget the "Wizard of Oz" trivia contest before the movie.

Thursday 6

The Living Well Fall Speaker Series continues with **"Effective Communication Skills at Work and Home,"** from noon to 1 p.m. in the Bldg. 361 auditorium. The program is sponsored by the Work-Life Center, Health Services Department, Employee Assistance Program, External EAP/CONCERN, and EODD/Career Center.

UTel LLTN Lawrence Livermore Television Network

LAB TV broadcast

MONDAY– FRIDAY, OCT. 3-7

In celebration of the 30th anniversary of the AID Employment Program at LLNL, a non-profit agency that contracts with the Laboratory to train and supervise developmentally disabled adults, LLTN will air **"I Know You Can Do it."** This program captures the early accomplishments and issues faced by fellow employees with developmental disabilities.

This program will appear on Lab TV Channel 2, 4 and 7
at 10 a.m., noon, 2, 4 and 8 p.m. and 4 a.m.

IN MEMORIAM

Alfred Henry Cassell, Jr.

Alfred (Al) Henry Cassell, Jr. died in his sleep from lung cancer on Aug. 30. He was 78.

Cassell was born on Sept. 19, 1926, in St. Louis, Mo. He joined the U.S. Navy at the age of 17 and served in the Pacific Theater during World War II, where he participated in the invasion of Okinawa.

After the war, he attended Indiana State University. He was recalled to active duty and spent two more years in the Navy in the Korean War. He moved to California and taught high school in Martinez and Palo Alto for ten years. He worked at the Camp Parks Job Corp. until 1968 when he joined the Laboratory. He worked in Mechanical Engineering as an administrator for personnel and education.

He retired in 1990 and moved to Ottawa, Kansas to be near his son and grandchildren.

He is survived by his wife of 55 years, Henrietta; sons, David and Bob Cassell; and grand children, Terrance and Faye, all of Ottawa, Kan.

At his request, no services were held. Donations may be made in his memory to the Wounded Warrior Project, P.O. Box 758517, Topeka, KS 66675-8517.

George E. Nielsen

George E. Nielsen died on Sept. 19, in Reno. He was 89.

Born in Hood, Calif., in 1916, he developed his free lance writing skills working with radio stations in the Los Angeles area. He went on to be an associate editor with Sacramento *Life Magazine*. In 2002 he published a novel, *Out from the Ashes*.

He met and married his first wife, Irene in 1941. They were married until her death in 1995.

From 1941 to 1961 he served in the U.S. Air Force, spending most of his time in the Office of Special Investigations. He traveled to Japan, Korea, Okinawa and Labrador. After retiring from the Air Force, he was employed by the Laboratory as a manger in the security department until 1969. He was also a member of the American Society for Industrial Security and served as chairman of the San Francisco Bay Area Chapter.

Nielsen was a business owner until 1977, importing precious and semi-precious gems. He was a certified diamond grader. During this time, he accepted the position as president of a corporation that set up trade shows throughout the United States.

In 1978 he became a consultant for PG&E in San Francisco, where he conducted physical security surveys of the facilities in Northern California until 1982.

He is survived by his wife, Elizabeth Nielsen, and his daughter, Sandra Overbaugh.

No services were held. Donations may be made to the American Cancer Society.

David Glenn

David Glenn, a Pleasanton resident for the past 36 years, died on Monday, Sept. 26. He was 73.

Glenn was born on Aug. 27, 1932, in West Virginia. He was a graduate of the University of Washington and worked at the Laboratory for 25 years.

He was a member of Valley Christian Center and the Dublin Sierra Club.

He is survived by his wife of 34 years, Raili Glenn; brother, Franklin Glenn of Pennsylvania; and sister Betty Brady, also of Pennsylvania.

Visitation will be today (Sept. 30) from 10 to 11 a.m., followed by a service at Graham-Hitch Mortuary, 4167 First St., Pleasanton. Burial will be at 1:30 p.m. today at Skylawn Memorial Park, Highway 92 at Skyline Blvd., San Mateo.

Kurt Sinz

Kurt Sinz died on Aug. 6, following a battle with lymphoma. He was 64.

He was born in Hamburg, Germany, Aug. 9, 1940, to the late Curt and Margarete Sinz, and immigrated with them to America at the age of 16. They resided in Glendale, Calif. where he attended Glendale Academy.

A physicist at LLNL for 36 years, Sinz graduated from Texas A&M in 1967 with a Ph.D. in physics. He was a California state scholar, graduate fellow from Texas A&M, and a resident research associate, sponsored by the National Science Foundation and NASA.

He is survived by his wife, Beverly; and four children, Erika, Philip, Katrina and Paul.

A memorial service was held in Lafayette. Donations in his memory can be made to LOPC Building Fund, 49 Knox Drive, Lafayette, CA 94549 or Leukemia and Lymphoma Society, 1390 Market St., San Francisco, CA 94102.

No classified ads this week; advertisements will reappear in next Friday's *Newsline* issue

Due to space restrictions in this week's *Newsline*, the classified ads are available only on the Web, located at https://www-ais.llnl.gov/newsline/ads/ or http:// www.llnl.gov/pao/employee/. Ads must be submitted by close of business Tuesdays in order to appear next week in *Newsline* or on the Web.

Newsline

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Octavio Cervantes' message: education is key

Editor's note: In honor of National Hispanic Heritage Month, Sept. 15-Oct. 15, Newsline *is featuring members of the Amigos Unidos Hispanic Networking Group.*

By Linda Lucchetti
NEWSLINE STAFF WRITER

Amigos Unidos speaker Octavio Cervantes, center, from LLNL chats with Granada High students after his talk to their class.

Octavio Cervantes, a metallurgist in the Lab's Chemistry and Materials Science directorate, is on a mission.

He wants Hispanic high school students to stay in school. Octavio believes he is just the person to spread the word — not only does he understand the struggles, but he has lived with similar uncertainties. And, he has overcome many of the same obstacles students face today.

"I feel that I am still young and can get the point across easier," he said, in explaining his involvement in community outreach, especially the programs conducted by the Lab's Amigos Unidos Hispanic Networking Group, of which he is an active member.

Cervantes has been employed at the Lab for three years. He received his undergraduate degree from Cal Sate Northridge in mechanical engineering and then went to the University of Illinois at Urbana-Champaign for his masters in materials science and engineering. Currently, he is pursuing a Ph.D in materials science through the LLNL-UC Davis ITV program.

Cervantes attributes his educational achievement and career success to his parents who encouraged him to get an education since his early years in Mexico. And, Cervantes believes that since people helped him along the way, he should do the same.

It's not just knowledge that leads to success. Cervantes says that in Mexico, even if the young people are not schooled, they are respectful. "If we all respect each other, we could be more productive," is a message he conveys.

As part of the Amigos Unidos group activities, Cervantes is one of the members who often talks with high school students. He uses himself as an example telling them that "if you succeed in high school, most likely you will succeed in life."

The school presentations have been a well-received initiative of Amigos Unidos. Lab scientists and engineers of Hispanic heritage are showcased at local school assemblies — Michael T. Martin, Rey Bocanegra, Susane Head, Yahel de la Cruz, Alicia Calonico-Soto, Andres Martinez and Juan Hernandez, to name a few.

"We need more people in the sciences to stay competitive," Cervantes believes, thus he is eager to visit the students.

Cervantes is the chair of the Amigos Unidos scholarship committee that targets students from four counties — Alameda, Stanislaus, Contra Costa, and San Joaquin. The scholarships are open to all students, as another way to promote education. The students are graded on how much they know about the Laboratory and its mission, their academic grades, their writing skills, their financial need and their community involvement.

What else is in store for Cervantes? Well, his sister is a teacher in the Los Angeles area and much of what he learns about what is happening today in inner city schools comes from her. His admiration for her and her career leads him to believe that someday, he might become a college professor or a high school teacher.

Community CHAMPIONS

DDLS

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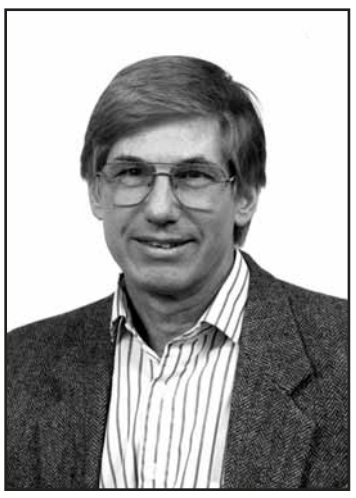
Through their gravity, dark matter and energy control the dynamical evolution and fate of the universe. Invisible dark matter also creates gravitational mirages, which can be captured by 3-D gravitational tomographic imaging.

Tyson directs the national effort to build a new facility — the Large Synoptic Survey Telescope (LSST) — a new kind of telescope-camera. The LSST will sharply probe the physics of dark energy and will create hundreds of petabytes of data. The required automated image analysis of this large database presents exciting technical challenges. With its large aperture and wide field of view, LSST promises to shed light on mysterious dark energy—considered to be the most urgent issue in the physics of our universe. Tyson will discuss recent images of dark matter and the excitement about his group's exploration of the Universe's dark side.

Tyson received a B.S. in physics from Stanford University in l962 and a Ph.D. from the University of Wisconsin at Madison in 1967, followed by a postdoctoral fellowship at the University of Chicago. He is a fellow of the American Physical Society and the American Academy of Arts and Sciences, and a member of the National Academy of Sciences and the American Philosophical Society.

The presentation will be rebroadcast on Lab TV Channel 2 Thursday, Oct. 20, at 10 a.m., noon, 2, 4, and 8 p.m. and Friday, Oct. 21, at 4 a.m.

For further information http://www.physics.ucdavis.edu/Cosmology/Cosmology_Group.html



J. Anthony "Tony" Tyson

Technical Meeting Calendar

Friday 30

INSTITUTE FOR GEOPHYSICS AND PLANETARY PHYSICS
"Probing Dark Energy and Inflation with Standard Rulers," by Lloyd Knox, UC Davis. Noon, Bldg. 219, room 163. Property protection area. Foreign national temporary escorted building access procedures apply. Contact: Wil van Breugel, 2-7195, or Lisa Lopez, 3-0250.

OCTOBER

Monday 3

CHEMISTRY & MATERIALS SCIENCE
"Bioanalytical Chemistry with Nanoflow Liquid Chromatography-Fourier Transform Mass Spectrometry: Reactive Oxygen Species, Proteins and Disease," by Nick Young. Chemisty & Materials Science, LLNL. 2 p.m., Bldg. 151, room 1209, Stevenson Room. Property protection area. Foreign national temporary escorted building access procedures apply. Contact: Ted Tarasow, 3-7241.

Tuesday 4

LIVERMORE COMPUTING
"LC Customers Monthly Meeting," 9:30 - 11 a.m., Bldg. 453, Armadillo Room. Common use facility. Foreign nationals may attend. Contact: Teresa Delpha, 3-7329.

Thursday 6

CENTER FOR MICRO AND NANO TECHNOLOGY AND BIOSECURITY & NANOSCIENCES LABORATORY
"Biomolecular Motors: Engines for Nanotechnology," by Henry Hess, Department of Materials Science and Engineering, University of Florida. 2 p.m., Bldg. 151, room 1209, Stevenson Room. Property protection area. Foreign national temporary escorted building access procedures apply. Contact: Ted Tarasow, 3-7241, or Beverly Zumwalt, 2-7535.

Friday 7

INSTITUTE FOR GEOPHYSICS AND PLANETARY PHYSICS
"Halo Substructures," by Christopher Kochanek, Ohio State University. Noon, Bldg. 219, room 163. Property protection area. Foreign national temporary escorted building access procedures apply. Contact: Wil van Breugel, 2-7195, or Lisa Lopez, 3-0250.

The deadline for the next Technical Meeting Calendar is noon Wednesday. Please submit your meetings via the Technical Meeting Calendar form on the Web.

HOME

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HOME campaign is a way to give back

Patti Lann, a 28-year Laboratory veteran and personnel and administrative manager in Defense and Nuclear Technologies (DNT), is chair of the 2005 HOME Campaign. Newsline spoke with her earlier this week, following a training session she presented to HOME representatives in the Bldg. 123 auditorium.

Q. What has been your involvement with past HOME campaigns?

A. I have contributed to campaigns over the years. And, last year, along with DNT, I chaired the "Run for HOME." It was a lot of fun. The best part was meeting the representatives from the various agencies and learning more about what they do and the level of caring they provide.

Q. How much does the HOME campaign hope to raise this year?

A. Last year, the goal was $1.65 million. This year, we hope to exceed that goal. However, our ambition this year is to raise the level of participation to 50 percent. Last year, participation was 44 percent. We can do better than that, with a Lab population of over 8,000 people.

This year, to inspire participation, we started the "LLNL at HOME in Our Community" projects. In July, we helped build homes in Livermore with Habitat for Humanity. In August, Lab employees donated back packs, school supplies, and gift certificates for shoes to needy children in the area, partnering with Tri-Valley Jubilee. This month, we sponsored bingo at the Livermore Veterans Administration Hospital. In October, we'll visit the Tracy "People for Pets" project.

Past HOME campaigns have either invited agencies to visit the Lab or have gone to the agencies. But, the "at HOME" projects have allowed many Lab employees not only to learn more about the agencies, but to get involved in a variety of projects and help out.

Patti Lann

Q.What's new in this year's campaign?

A. As I mentioned, the "at HOME" projects are a new concept this year. We hope that these have given employees opportunities to help, and in doing so, learn more about the agencies.

In addition, a major change this year has been helping the victims of Hurricane Katrina. This was an unexpected occurrence and it showed the generosity and spirit of Lab employees. Shortly after the disaster, we set up collection stations in the cafeterias and over 3 days, raised one-time only donations in the form of checks totaling $32K.

Last week, by a one-time only on-line donation method, through the HOME campaign, about $42K was raised. The money donated both at the cafeterias and on-line was designated for the Red Cross, Salvation Army and the Society for the Prevention of Cruelty to Animals, depending on the employees' request.

Q. This is the 31st year for the Lab's HOME campaign. What is the significance?

A. The first HOME Campaign in 1974 raised about $70K. Today's donation amount seems phenomenal in comparison. But, it shows the continuous generosity and concern of Lab employees.

Q. What is your personal philosophy about helping others?

A. I have been blessed in many ways. I feel fortunate and can honestly say that I have everything I need. Therefore, it is my responsibility to help others. As I get to know more of the people involved in the agencies, I also have the opportunity to better understand their needs. Many sent their resources to help others affected by Katrina. So, they are now struggling. We can't forget these local organizations that are in need.

Q. What has been the highlight for you so far as campaign chair?

A. Once again, I'd have to say getting to know the agencies and their people —working with Tri-Valley Jubilee and Habitat for Humanity, and meeting people like Michael Hingson from Guide Dogs for the Blind and hearing his story.

Q. *Newsline* is asking employees "Why is it important to participate in the HOME campaign?" How would you answer?

A. I believe that this year it is particularly important to participate. So many local agencies have given what they can to the hurricane relief. Children's Hospital in Oakland, for example, has sent doctors, nurses, and medical supplies. Yet their needs have not gone away. When you are blessed and have everything you need, it's a responsibility to give back, particularly in our own community.

CRDF

Continued from page 1

to selling their knowledge to other countries or terrorist groups.

Since its inception, CRDF has funded a broad range of research projects including environmental monitoring, HIV/AIDS and cancer, and protecting civilians against terrorism. Commercially-oriented projects have produced, among others, an energy-saving cryogenic process for refrigerating produce during transport, oral treatments for Tuberculosis, and a revolutionary prosthetics design. Additionally, CRDF supports the efforts of other organizations — including U.S. Government initiatives — that seek to engage Eurasian researchers through project development and management, oversight support, merit-based technical review of R&D proposals, and travel logistics.

"CRDF complements DOE programs that also redirect the research of former Soviet weapons scientists to peaceful scientific and technological pursuits," said Eileen Vergino, deputy director of the Center for Global Security Research.

For example, CRDF supports two nonproliferation programs in which the Nonproliferation, Arms Control and International Security Directorate (NAI) is involved.

It supports the U.S. State Department's Nonproliferation of Weapons of Mass Destruction Expertise (NWMDE) program, formerly known as the Science Centers Program, by facilitating comprehensive technical reviews of proposals submitted to the International Science and Technology Center (ISTC) and the Science and Technology Center in Ukraine (STCU). These Centers are important multilateral nonproliferation organizations in which the U.S. is a primary participant.

The State Department relies on LLNL for technical advice for proposals sent to the Centers. In this role, CRDF helps identify technical peer reviewers for proposals sent to the Laboratory science adviser, who evaluates reviewer comments and makes funding recommendations to the Department of State.

CRDF also plays a role in the DOE-funded Global Initiatives for Proliferation Program (GIPP). "The idea is to encourage former weapons scientists to develop technology-based commercial enterprises," says Kris Surano of P Division NAI. "Use of CRDF in the funding of GIPP contracts makes sure that scientists working on the projects actually receive the funds directly into their bank accounts and that they enjoy tax-free status for these monies (as has been negotiated with their government)."

A recent article published by the Commonwealth Club of California, and penned by CRDF Chair Gloria Duffy, addressed CRDF's focus on the future. "With terrorists on the hunt for nuclear weapons, CRDF has recently broadened its geographical range to provide former weapons scientists in Iraq and Libya with productive alternatives for their skills." Such a move will focus a decade of international science collaboration experience to bear in high priority areas at a critical time.

Over the past decade, the CRDF has raised and distributed $249 million in taxpayer dollars, private foundation and corporate contributions, to joint scientific research. This has taken the form of awarding over 2,400 grants involving 12,000 scientists, including 2,434 former weapons scientists.

"It is remarkable," says Crawford, "that CRDF manages to make a little go a long way in simultaneously advancing science and technology, economic growth and global security. The projects are scientifically and technically worthy and the people involved are incredible. It's amazing what is being done across what used to be a vast divide with a relatively modest investment."

For more information about CRDF, visit http://www.crdf.org.

Exploring the 'Frontiers of Physics'

Last week's "Frontiers of Physics Day" brought more than 400 local high school students to the Lab for a day of tours and presentations. Here, Lab employee Stephane Terracol, right, makes ice cream using a liquid nitrigen process while fellow Lab employee Simon Labov, center, and visiting high school students look on.

JULIE KORHUMMEL/NEWSLINE

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